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# STRING SWITCHING APPARATUS AND ASSOCIATED METHOD

## ABSTRACT OF THE DISCLOSURE

An improved string switching apparatus and method is provided for  
5 controllably connecting a plurality of solar array strings to an output power bus. The  
string switching apparatus can include a plurality of field effect transistors electrically  
connected in parallel with respective solar array strings and a digital controller for  
controllably switching the field effect transistors between on and off states to thereby  
control the power level of the output power bus. The field effect transistors can be  
10 switched between an on state in which the output of the respective solar array string is  
shunted and an off state in which the output of the respective solar array string is  
delivered to the output power bus. In addition to merely providing power to an output  
power bus, the string switching apparatus and method can controllably connect the  
plurality of solar array strings to either an output power bus or an auxiliary power bus,  
15 such as a battery charging power bus. In addition to the plurality of shunt regulators,  
the string switching apparatus can include a plurality of coupling switches electrically  
connected between respective solar array strings and one of the output power bus and  
the auxiliary power bus for controllably directing the power to a selected one of the  
power buses.

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